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EXAMINER

GEORGE, KEITH M

ART UNIT PAPER NUMBER

2663

DATE MAILED: 05/10/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/167,267

Applicant(s)

SHIMIZU, SEIJI

Examiner

Keith M. George

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9 and 11-17 is/are rejected.
- 7) ☒ Claim(s) 4 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 1998 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 8, 9, 14 and 16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kaiser, U.S. Patent 5,450,086, hereinafter Kaiser.

3. Referring to claims 1, 8, 14 and 16, Kaiser teaches a self-tuning receiver/decoder for reception of FSK data transmission that is especially useful for miniaturized transponder operation in which it alternates between receiving and transmitting modes (wireless transmitting/receiving means for transmitting and receiving data) (abstract). When the transmitter changes to another frequency, the receiver/decoder is detuned from its present initial condition, and received signal strength accordingly falls (detecting a strength of a receiving electric field) (column 4, lines 59-63). If the signal strength falls below the threshold set by the limiter, indicating a possible new transmitter frequency, the HFLON pulse train disappears, the divider becomes active, and the clock signals from the sine-to-square wave converter advance the state of the counter (controlling the frequency of an operation clock based on the electric field strength) (column 4, lines 64-68).

4. Referring to claims 2 and 9, Kaiser teaches the device described in reference to claims 1 and 8 above and also clearly teaches that the changing data bits of the counter switch tuning

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capacitors and a tuning inductor to alter the resonant frequency of the resonant circuit until the receiver is retuned and the pulse train HFLON reappears (column 5, lines 1-6). It is also clear that the device will cycle through the available frequencies f_0 , f_1 , f_2 , and f_3 to find the new active frequency. If the new frequency is lower than the old frequency, then inherently the operation clock will operate at a reduced frequency (column 5, lines 21-35).

5. Referring to claim 3, Kaiser teaches the device described in reference to claim 1 above and also clearly teaches that when the static output of the counter is the identifier for the frequency just received, a pulse transfers the data to an output latch (memory for storing a value of the strength of the electric field) (column 5, lines 9-14).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5-7, 11-13, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaiser in view of Kondo, U.S. Patent 5,390,340, hereinafter Kondo.

8. Referring to claims 5, 6, and 11-13, Kaiser teaches the device shown in reference to claims 1 and 8 above with the possible exception of using an interrupt signal to control the frequency of the clock. Kondo teaches a radio receiver including a field detection circuit which measures the electric field intensity from an amplified signal to produce an intensity signal representative of the electrical field intensity. The field intensity signal is supplied with the

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difference signal to the synchronization control circuit (column 6, lines 30-51). The synchronization control circuit interrupts the clock synchronization control signal (column 5, lines 66-68). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the interrupt function of the synchronization control circuit that follows from the electrical field intensity as taught by Kondo in the device of Kaiser that also measures the electrical field intensity. One of ordinary skill in the art would have been motivated to do this because the resultant clock synchronization circuit will stop the synchronization control operation (Kondo, column 5, line 68 - column 6, line 2).

9. Referring to claim 7, Kaiser and Kondo teach the device as described in reference to claims 1-6, 8-14 and 16 above where Kaiser has been shown to clearly teach the reception of the HFLON pulse train at a specific frequency. When the signal strength falls below a threshold, the HFLON pulse train disappears. Then the receiver is returned and the pulse train HFLON reappears (processing data transmitted and received based on an operation clock) (column 4, line 53 - column 5, line 6). The HFLON pulse train is received at the first frequency and then when the signal is lost, the receiver retunes to another frequency using a different clock frequency and the HFLON pulse train is again processed.

10. Referring to claims 15 and 17, Kaiser teaches the device described in reference to claims 14 and 16 above with the possible exception of the operating speed of a CPU changing according to the frequency of the operation clock. Kondo teaches in figure 2 a processor unit (13a) that contains the sync control circuit that has been shown above to be dependent on the field intensity signal. The sync control circuit feeds the clock sync circuit (16a) that in turn feeds the decoder unit (15a). It is clear from figure 2 that the processor unit will operate at a speed that is

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dependent on the field intensity signal. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to operate a processor unit at a speed dependent on the field intensity signal as taught by Kondo in the device of Kaiser that also measures the electrical field intensity. One of ordinary skill in the art would have been motivated to do this to control the synchronization between the digital signal sequence and a sequence of internal clock pulses (Kondo, column 2, line 66 - column 3, line 2).

Allowable Subject Matter

11. Claims 4 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

12. Applicant's arguments filed 3 March 2004 have been fully considered but they are not persuasive.

13. On pages 9-10 of the Amendment in Response to Non-Final Office Action referring to claim 1, applicant argues that the prior art does not teach an operation clock control means for controlling, based on a received electric field strength detected by a detecting means, a frequency of an operation clock used for processing data transmitted and received by a wireless transmitting/receiving means. In response, Kaiser clearly teaches a sine-to-square wave converter (figure 2, 14), the output of which, at the received signal frequency enters a divider, i.e., a divide-by-N counter (figure 2, 16). The rate N is established according to rationale set

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forth hereinbelow. The divider output is a source of clock signals for the 2-bit counter (figure 2, 12). The counter will, when enabled, count at the rate of f_n/N , where f_n is the received one of frequencies f_0, f_1, f_2, f_3 (column 4, lines 16-21). From this teaching, it is clear that Kaiser is teaching an operation clock control means (sine-to-square wave converter) which controls the frequency of an operation clock used for processing data (2-bit counter).

14. Referring to claims 14 and 16, applicant again argues that Kaiser does adjust the processing clock speed based on the signal strength. However, as has been clearly shown above, if the signal strength falls below the threshold set by the limiter, indicating a possible new transmitter frequency, the HFLON pulse train disappears, the divider becomes active, and the clock signals from the sine-to-square wave converter advance the state of the counter. Clearly the speed of the system is controlled based on the strength of the received signal.

15. Applicant has not provided further arguments for the claims depending from 1, 14 and 16, claims 2-6, 15 and 17, or for claims 5-7 and 11-13 rejected under 35 U.S.C. 103, therefore the rejection to these claims is maintained.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith M. George whose telephone number is 703-305-6531. The examiner can normally be reached on M-Th 7:00-4:30, alternate F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Keith M. George
4 May 2004



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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 5/6/07